

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (currently amended) A hydrophilic, water-wettable, semipermeable hollow-fibre membrane, based on a synthetic first polymer, particularly for hemodialysis, hemodiafiltration ~~or and hemofiltration, based on a synthetic hydrophilic polymer that forms the membrane structure or a combination of a~~

0.005, whereby the hollow-fibre membrane in the dry state is free from pore-stabilising additives in the membrane wall. ~~7 characterised in that a polyelectrolyte with negative fixed charges is physically bound in the separating layer.~~

2. (currently amended) Hollow-fibre membrane according to Claim 1, characterised in that it also comprises a ~~hydrophobic first polymer that forms the membrane structure and~~ a hydrophilic second polymer.

3. (currently amended) Hollow-fibre membrane according to Claim 1 2, characterised in that the synthetic first polymer ~~is a hydrophobic first polymer is an aromatic sulfone polymer such as polysulfone, polyethersulfone, polyphenylenesulfone or polyarylethersulfone, a polycarbonate, polyimide, polyetherimide, polyetherketone, polyphenylene sulfide, or a copolymer or mixture of these polymers and the hollow-fibre~~ membrane also comprises a hydrophilic second polymer.

4. (currently amended) Hollow-fibre membrane according to Claim 3, characterised in that the hydrophobic first polymer is a an aromatic sulfone polymer such as polysulfone, polyethersulfone, polyphenylenesulfone or polyarylethersulfone, a polycarbonate, polyimide, polyetherimide, polyetherketone,

polyphenylene sulfide, or a copolymer or a modification of these polymers, or a mixture of these polymers polysulfone or a polyethersulfone.

5. (currently amended) Hollow-fibre membrane according to Claim ~~±~~ 4, characterised in that the hydrophilic first second polymer is ~~polyvinylpyrrolidone, polyethylene glycol, polyvinyl alcohol, polyglycol monoester, polysorbate, carboxymethylcellulose, or a copolymer of these polymers~~ polysulfone or a polyethersulfone.

6. (currently amended) Hollow-fibre membrane according to Claim ~~±~~ 2, characterised in that the ~~supporting layer extends from the separating layer across essentially the entire wall of the hollow fibre membrane, has a sponge like structure and is free from finger pores~~ hydrophilic second polymer is polyvinylpyrrolidone, polyethylene glycol, polyvinyl alcohol, polyglycol monoester, polysorbate, carboxymethylcellulose, or a modification or copolymer of these polymers.

7. (currently amended) Hollow-fibre membrane according to Claim 1, characterised in that the supporting layer extends from the separating layer across essentially the entire wall of the hollow-fibre membrane, has a sponge-like structure and is

free from finger pores ~~it has a minimum sieving coefficient for cytochrome c of 0.85.~~

8. (currently amended) Hollow-fibre membrane according to Claim 1, characterised in that it has a minimum sieving coefficient for cytochrome c of 0.85 ~~maximum sieving coefficient for albumin of 0.003.~~

9. (currently amended) Hollow-fibre membrane according to Claim 1, ~~with an ultrafiltration rate in albumin solution in the range of 30 to 55 ml/(hm²mmHg)~~ characterised in that it has a maximum sieving coefficient for albumin of 0.003.

10. (currently amended) Method for producing a hydrophilic, water-wettable, semipermeable hollow-fibre membrane according to Claim 1, the method comprising the following steps:

- a. preparing a homogeneous spinning solution comprising 12 to 30 wt.%, relative to the weight of the spinning solution, of a synthetic first hydrophilic polymer ~~or 12 to 30 wt.%, relative to the weight of the spinning solution, of a synthetic first polymer in combination with 0.1 to 30 wt.%, relative to the weight of the spinning solution, of a hydrophilic second polymer, wherein the synthetic first polymer in the case of the~~

~~combination can be hydrophilic or hydrophobic,~~ and, if applicable necessary, other additives in a solvent system,

- b. extruding the spinning solution through the annular slit of a hollow-fibre die to give a hollow fibre,
- c. extruding an interior filler through the central opening of the hollow-fibre die, the interior filler being a coagulation medium for the synthetic first polymer and comprising a solvent and a non-solvent for the synthetic first polymer,
- d. bringing the interior filler into contact with the inner surface of the hollow fibre to initiate coagulation in the interior of the hollow fibre and for formation of a separating layer on the inner surface of the hollow fibre and formation of the membrane structure,
- e. passing the hollow fibre through a coagulation bath to complete the formation of the membrane structure if necessary, and to fix the membrane structure,
- f. extracting the hollow-fibre membrane thus formed to remove the solvent system and soluble substances,
- g. drying the hollow-fibre membrane,

characterised in that the interior filler contains a polyelectrolyte with negative fixed charges, ~~wherein the~~

~~proportion by weight of the polyelectrolyte is 0.025 to 5 wt.%, relative to the weight of the interior filler, and the steps of the method are to be carried out in such a way that~~ as a result of which a hollow-fibre membrane ~~according to Claim 1~~ is obtained with a minimum sieving coefficient for cytochrome c of 0.80 combined with a maximum sieving coefficient for albumin of 0.005.

11. (currently amended) Method according to Claim 10, characterised in that the spinning solution contains 12 to 30 wt.%, relative to the weight of the spinning solution, of a ~~hydrophobic~~ synthetic first polymer in combination with 0.1 to 30 wt.%, relative to the weight of the spinning solution, of a hydrophilic second polymer.

12. (currently amended) Method according to Claim 11, characterised in that an aromatic sulfone polymer such as polysulfone, polyethersulfone, polyphenylenesulfone or polyarylethersulfone, a polycarbonate, polyimide, polyetherimide, polyetherketone, polyphenylene sulfide, or a copolymer or mixture of these polymers is used as the ~~hydrophobic~~ synthetic first polymer.

13. (currently amended) Method according to Claim 11, ~~10~~, characterised in that polyvinyl-pyrrolidone, polyethylene glycol, polyvinyl alcohol, polyglycol monoester, polysorbate, carboxymethylcellulose, or a copolymer of these polymers is used as the hydrophilic second polymer.

14. (previously presented) Method according to Claim 10, characterised in that the solvent system comprises a polar aprotic solvent.

15. (previously presented) Method according to Claim 10, characterised in that the polyelectrolyte is selected from the group of polyphosphoric acids, polysulfonic acids or polycarboxylic acids.

16. (original) Method according to Claim 15, characterised in that the polycarboxylic acids are homo- or copolymers of acrylic acid.

17. (previously presented) Method according to Claim 10, characterised in that the proportion by weight of the polyelectrolyte relative to the weight of interior filler is 0.01 to 1 wt. %

Add new claims 18 and 19 as follows:

18. (new) Hollow-fibre membrane according Claim 1, characterised in that a polyelectrolyte with negative fixed charges is physically bound in the separating layer.

19. (new) Hollow-fibre membrane according to Claim 1, with an ultrafiltration rate in albumin solution in the range of 30 to 55 ml/(h·m²·mmHg).